



# INTERNATIONAL TELECOMMUNICATION UNION

## RADIOCOMMUNICATION STUDY GROUPS

MEETINGS OF WP 4B, TGs 4/3 & 4/5

INTELSAT HEADQUARTERS, WASHINGTON DC

31 MAY - 10 JUNE 1994

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### TASK GROUP 4/5

#### REPORT FROM CHAIRMAN OF DG (II) - REVERSE BAND WORKING

This DG had three meetings where the input documents 4-5/23 + Corr. 1, 25, 28, 31, 32, 39, 41, 46, 47 were considered. Two sub-drafting groups were created as follows:

- (i) Satellite to Satellite Interference

-- Dr. Ramashastry, USA

- (ii) Earth Station to Earth Station Interference

-- Mr. Shinonaga, Japan

These two sub-drafting groups prepared two Temp. documents, Temp 9, Rev. 1 for the Satellite to Satellite situation and Temp. 2, Rev. 2 for the ES to ES situation. These two Temp. documents were extensively discussed in the DG meetings.

Based on the assumptions used in the studies presented in the above referred input documents, it was concluded that the sharing between Non-GSO MSS FL's in reverse band mode and GSO/FSS systems in the forward band mode is technically feasible in the bands C, Ku and Ka (including the allotment plan bands). These studies assumed technical characteristics of a large number of representative GSO/FSS systems (including Allotment Plan of Appendix 30B) and those Non-GSO MSS systems currently being planned. It should be noted that while there is no information available from the ITU-R for the acceptable interference criteria of the Non-GSO MSS FL's, a number of reasonable assumptions were made in these studies.

In the two Temp. documents, some technical and operational difficulties in the use of Ka band for RBW are described. The practicalities of employing RBW in congested FSS bands are also discussed.

With regard to the calculation coordination distance for ES to ES interference it is suggested to use the ITU-R Recs. 847, 848, 849 together with some realistic parameters for the ES of Non-GSO MSS FL's. Further, to assess the need for coordination between space stations of the Non-GSO MSS FL's and GSO/FSS, two options are suggested; one option being the application of a delta T/T procedure similar to that of Appendix 29 and the second option of establishing Pfd limits at the GSO.

**Action Items for RBW**

1. Confirm acceptable interference criteria for Non-GSO MSS FL's  
- TG 8/3
2. Review application of BR's procedure CR-15 for its applicability to the ES to ES coordination with systems in Appendix 30B  
- TG 4/5
3. Establish parameters for ES of Non-GSO MSS FL's to be used in Rec. 849.  
- TG 8/3
4. Develop details of a delta T/T procedure as a possible method to assess need for coordination between satellites.  
- SG-4, WP of CPM
5. Assess feasibility of using a Pfd limit from Non-GSO MSS FL's at the orbit to avoid need for coordination and establish such limit and the associated regulatory procedure.  
- TG 4/5, WP of CPM
6. Consider input from 4-9/S regarding sharing of Non-GSO MSS FL's in RBW with stations in the fixed service.  
- TG 4/5

**CERTIFICATE OF SERVICE**

I, Patricia Dickens, hereby certify that I have on this 20<sup>th</sup> day of June, 1994, caused copies of the foregoing letter to be served via hand delivery (indicated with \*) or by U.S. mail, postage-prepaid, on the following:

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